THE SOURCE

NEWSLETTER OF THE NHDES DRINKING WATER SOURCE PROTECTION PROGRAM
ON THE WEB AT WWW.DES.STATE.NH.US/DWSPP

WINTER 2002

A Good Emergency Plan Helps Protect Sources

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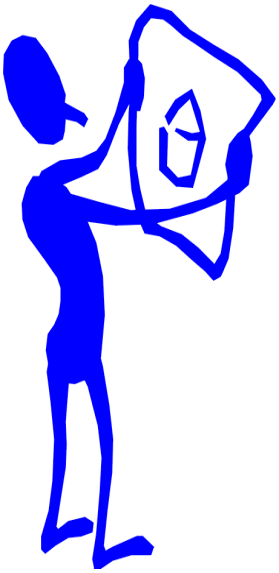

Would you know what to do if an emergency happened at your water system? Would you know who to notify? How might you provide safe water during an emergency? What can you do to help prevent an emergency? If your water system has an up-to-date, effective, emergency plan, you know the answers to these questions. However, once an emergency occurs, it's too late to look for the answers.

Emergency planning for community water systems in New Hampshire is not a new concept. In the late 1980s and early 1990s, approximately 100 of the state's community water systems submitted emergency plans to DES as they were required to do by law. Since then, most water systems have not kept this important water system management and protection tool current. Several months ago, DES began an initiative to correct this shortcoming and since the tragic events of September 11, 2001, there has been rapid acceleration of this effort. Over the next year, all community water systems in New Hampshire will be required to submit an emergency plan to DES.

A good emergency plan covers both short-term and long-term issues. Short-term issues focus on the initial response, mitigation, and recovery phase of emergencies. To address short-term issues, systems will need to write out a chain-of-command; describe emergency-related responsibilities of all key personnel; develop notification and service/repair lists; list primary system features and equipment; look into sources of alternate water supply; describe how to implement a boil order and/or water conservation measures; and describe the process of returning to normal operation after an emergency.

Long-term issues focus on reducing a system's vulnerability to emergencies. A comprehensive vulnerability analysis is integral to a good emergency plan and systems are strongly encouraged to compile one. To do a vulnerability analysis, you must ask, "What could cause an emergency at our system?" Start by considering unpreventable scenarios such as ice storms, floods, droughts, power outages, sabotage, and accidents that could impact your system. Next, consider preventable scenarios such as age and obsolescence of equipment, lack of equipment or spare parts, poor system maintenance, high-risk land uses near your sources, and lack of source protection efforts. Finally, rate the likelihood of occurrence of each scenario and consider the estimated impact of each to the supply, storage, and distribution components of your system. This analysis can then serve as a planning tool to help you identify steps you can take to reduce your susceptibility to these types of emergencies.

One resource that can help you complete such a vulnerability analysis is the Source Assessment Report being prepared by DES for every New Hampshire public drinking water source. Over 1500 systems have already received their reports and the remaining 600+ reports are expected to be completed and mailed by December 2002. Source assessment information is also available at www.des.state.nh.us/dwspp/dwsap.htm.

DES recognizes that each system will require different resources to develop or update an emergency plan. To help systems understand the basic content and format of a good emergency plan, DES has created two Emergency Plan Guides, one for systems serving less than 500 people, and one for systems serving more than 500 people. The guides are available at www.des.state.nh.us/wseb or by contacting Dave Reid at 271-3431 or dreid@des.state.nh.us. Technical assistance is also available from DES and may also be available to some systems through Northeast Rural Water Association or the Rural Community

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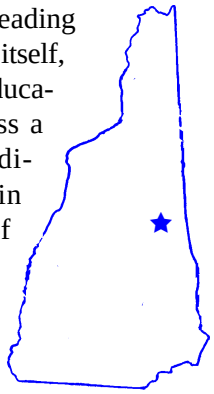
Spotlight on...Village District of Eidelweiss

The Village District of Eidelweiss is a residential precinct in the Town of Madison at the southern end of the Mount Washington Valley. In 1993, a gravel pack well was installed for an expected buildout of about 700-800 single-family residences. The well is situated on the edge of the Saco-Ossipee basin stratified aquifer, one of the largest stratified aquifers in the Northeast.

In 1999 working through the North Country Council, Eidelweiss received a DES source water protection grant to gather improved data on potential contamination sources, update GIS data, and develop an action plan for prevention of contamination. From that plan emerged a key recommendation to work with the Town of Madison to develop a groundwater protection ordinance.

As the only municipal water supplier in Madison, Eidelweiss anticipated a number of obstacles since the town has traditionally not been known to adopt or enforce zoning. However, particular circumstances such as the location of Madison in relation to the aquifer and concerns over a proposed large scale sludge spreading project within the aquifer zone itself, combined with a vigorous education campaign, helped to pass a groundwater protection ordinance by a large majority in March of 2000. As a result of the ordinance, the Town extended the aquifer overlay zone and markedly restricted the commercial activities within the zone. In addition, a code enforcement officer was hired for the town soon after passage of the ordinance. To date, these changes have impacted two commercial developments.



For more information about Madison's groundwater protection ordinance, contact David Maudsley, Village District of Eidelweiss, at 367-9022. Information about the grant program that funded this project can be obtained by contacting Johnna McKenna, DES, at 271-7017 or jmckenna@des.state.nh.us.

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Assistance Program. Additionally, emergency planning may be eligible for source protection grant funding offered each fall. For information about these grants, contact Johnna McKenna at jmckenna@des.state.nh.us or 271-7017.

All community public water systems will be required to submit an emergency plan to DES by the end of 2002 pursuant to Env-Ws 360.14, which is currently being adopted. Community systems will then be required to submit an updated emergency plan once every six years. Emergency plans will be checked during each scheduled sanitary survey. Lack of a plan will be a survey deficiency. Additionally, systems must meet their emergency plan requirements to participate in the sampling waiver program.

Emergency plans are dynamic resources, changing as the needs of the system change. That is why DES recommends that systems update their plans annually and why it is important to practice and evaluate your emergency plan. Don't let your plan gather dust on some obscure shelf. Be sure that all key system personnel know that the plan exists, where it is kept, and that they are trained in its use. Larger systems should involve local emergency officials in the development, practice, and evaluation of their plan. Emergency planning is a significant endeavor, but one that can benefit the system and its users through emergency response preparedness, contingency planning, and source protection.

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Closer To Home

Information for well owners and public water system customers

Understanding Risks from Drinking Water

Trying to determine if you are at risk from substances in your drinking water is not an easy task. Simply stated, "risk" is the likelihood that a harmful consequence will occur as a result of exposure to a hazard. An important thing to note in this definition is that for risk to occur there must be both a *source* of risk (the hazard) and an *exposure* to the hazard. For example, an industry near your home might use large amounts of a substance in its manufacturing process that could contaminate drinking water (a *source* of risk), but if a release of that contaminant to the environment never occurs, then you are never *exposed* to the hazard.

The most important first step to understanding whether your family is at risk from your drinking water is to have the water tested to determine if contaminants are present and, if so, at what level.

Learning that various contaminants are present in your drinking water or that potential contamination sources have been found in the vicinity of your well can be alarming. However, it is important to realize that a release of contaminants from a facility that is labeled a "potential contamination source" may never occur (thus there is no exposure) provided it is using good management practices.

It is also important to realize that no drinking water is completely pure, whether it comes from your tap or a bottling plant. All water contains some minerals, microbes, or impurities. Concern arises when one of these substances is present at a high enough concentration and someone drinks enough of the water to cause adverse health effects.

Source protection measures offer a means by which you can reduce the risk to you and your drinking water. By instituting protection measures in the vicinity of your well, you can reduce the likelihood that releases of harmful substances will occur.

For instance, by prohibiting the storage of large amounts of hazardous substances such as fertilizers, pesticides, road salt, and petroleum products in the area near your well, you have reduced the existence of the hazard and made an exposure unlikely. So be sure that these items are not stored in a shed or garage near your well.

Another important protection measure is educating people about the small steps that they can take to protect drinking water. When people understand that dumping used motor oil or not cleaning up a gasoline spill could potentially contaminate drinking water, they will be more likely to avoid these activities, resulting in fewer hazards, reducing everyone's risk.

For more information on drinking water health risks or testing of your drinking water contact DES's Water Supply Engineering Bureau at 271-3139 or see our website at www.des.state.nh.us/wseb.

Marine Engine Initiative Helps Protect Surface Water Sources

DES has teamed up with the New Hampshire Marine Trades Association to encourage consumers to purchase and use cleaner-burning (4-stroke and direct fuel injection 2-stroke) marine engines. The goal of the initiative is to improve air and water quality by eliminating the older carbureted 2-stroke engines, which can pass as much as 30 percent of their fuel through the combustion chamber unburned. For surface waters, this can result in elevated levels of benzene, MtBE, and other toxic components of gasoline, all threats to safe drinking water supplies.

The low-pollution engines are available for sale from many marine dealers and retailers all over New Hampshire. Water suppliers, especially those using surface sources, might want to contact local dealers or their lake or river association to see how they might be able to help them spread the word about these engines.

For more information about the initiative, contact Jacquie Colburn at 271-2959 or jcolburn@des.state.nh.us.

Hot Off the Presses! New Water Efficiency Fact Sheets

DES has created a series of 16 fact sheets describing efficient water use at home and for primary industrial and commercial activities utilizing large volumes of water. The following lists the topics and corresponding fact sheet number:

- domestic indoor use (26-2)
- outdoor use/xeriscaping (26-3 & 4)
- agricultural irrigation (26-5)
- golf courses (26-6)
- industrial facilities (26-7)
- sand/gravel operations (26-8)
- public water utilities (26-9)
- laundry facilities (26-10)
- snowmaking (26-11)
- aquaculture (26-12)
- institutions (26-13)
- health care facilities (26-14)
- water audits (26-15 & 16)

The new fact sheets are available at www.des.state.nh.us/ws.htm (scroll to bottom) or by calling 271-2975.

Although New Hampshire is typically thought of as a water-rich state, it is currently experiencing extensive demand for water as its population and economy expand. In addition, recent droughts have also demonstrated the need to develop effective long-range water supply planning that includes water efficiency practices. *DES defines "water conservation" as any beneficial reduction in water losses, waste, or use.* Water conservation practices are proven to save valuable water resources and protect the environment. Increased water use efficiency is also directly linked to improved energy conservation and pollution prevention. The current Large Groundwater Withdrawal Rules (Env-Ws 387 & 388) and the proposed Instream Flow Rules (Env-Ws 1900) partially address the problem of growing impacts to our state's water resources. DES and the Public Utilities Commission also recently completed a legislative report (found at www.des.state.nh.us/pdf/Report_DES-PUC.pdf) that makes recommendations to the legislature on how existing state laws and policy can be enhanced to further encourage water efficiency.

For more information about how you can improve water efficiency practices, contact Diana Morgan at 271-2947 or dmorgan@des.state.nh.us, or Brandon Kernen at 271-0660 or bkernen@des.state.nh.us.

New Resource Addresses Wastewater Side of Water Supply

As growth in New Hampshire increases, so do the demands on local water suppliers. To keep up, water suppliers are called upon to find new sources, increase production, and operate treatment and delivery systems at peak performance. The treatment of water also generates wastewater including water from well rehabilitation activities, routine discharges such as facility backwash, and discharges associated with chlorine use, pH adjustment, and construction, disinfection, and maintenance of supply lines. To help water suppliers navigate through the regulations concerning these water system wastewaters, DES has developed a fact sheet entitled *Wastewater from Drinking Water Systems* (WD-WSEB-22-14).

This new fact sheet focuses on clarifying state regulations concerning discharges to surface water and groundwater. The disposal of operational wastewaters is regulated under the *Groundwater Discharge Permit and Registration Rules* (Env-Ws 1500). Also included in the fact sheet are recommended best management practices for the management and disposal of these wastewaters as well as prohibited discharges.

The new fact sheet is available online at www.des.state.nh.us/factsheets/ws/ws-22-14.htm or by calling 271-2975. For more detailed information about nondomestic wastewater discharges, contact Mitch Locker at 271-2858 or mlocker@des.state.nh.us.

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